# This Page Is Inserted by IFW Operations and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

## IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

### DEC RATION FOR PATENT APPLICATION

| As a below named inventor, I hereby declare that:                             |  |  |                   |                           | Attorney I  | Attorney Docket No                            |                                 |                         |
|---|--|--|-------------------|---------------------------|---|---|---------------------------------|-------------------------|
|   |  | lress and citizenship are as   |                   |                           |   |   |                                 |                         |
|   | RATE PRIN  | rst and sole inventor (if onless subject matter which is caped to the subject matter which is the specification of which is  | THE               | RMALLY                    | RICH a patent i   | S sought on the inven                         |                                 |                         |
| ⊠   | was filed on                                       | April 6, 2000 as United  | l States          | s Applicat                | ion Serial No   | 00/544.262 an DOX                             | 'Internation                    | al                      |
| I acknowledge th<br>§1.56.  | at I have revi<br>ent referred t<br>ne duty to dis | ewedand understand the co<br>o above.<br>close information which is i  | ntents<br>nateria | of the abo<br>al to paten | ve identified sp<br>tability as defii                   | ecification, including t                      | he claims, as<br>of Federal Re  | gulations               |
| before that of the  | e application                                      | y benefits under Title 35, Ur<br>ive also identified below an<br>on which priority is claime   |                   | tates Code<br>gn applica  | , §119 of any fo<br>tion for patent                     | reign application(s) for inventor's certifica | or patent or i<br>te having a f | inventor'<br>iling date |
| Prior Foreign Ap (Number)   | (Country)  |  | lonth/Y           | (ear Filed)               |   |   |                                 | y Claimed<br>No         |
| (Number)  | (Country)  |  |                   | ear Filed)                |   |   | □ Yes                           | □ No                    |
| by the first parag  | graph of Titl<br>lefined in Tit                    | er Title 35, United States Collaims of this application is a second states Code, and the second states Code, and the second seco | \$112, I          | acknowle                  | ne prior United dige the duty to hich became as cation. | States application in                         | the manner                      | provided                |
| (Application Num  | iber)  | (Filing Date)  |                   | <del></del> -             | Pending<br>(Status - pater                              | ited, pending, abando                         | ned)                            |                         |
| (Application Num  | nber)  | (Filing Date)  |                   | <del></del>               |   | ited, pending, abandor                        |                                 |                         |
|   |  | attorney to prosecute this a<br>ser (Registration No. 18,957<br>Law Offices of Jim Zege<br>801 North Pitt Street, #1<br>Alexandria, VA 22314   | ), reie<br>er     | phone: 703                | transact all bi<br>-684-8333.                           | siness in the Patent a                        | nd Tradema                      | rk Office               |
| made are punishal   | ble by fine or                                     | ents made herein of my own<br>ther that these statements<br>imprisonment, or both, und<br>e the validity of the applica  | were m<br>Ier Soc | tion 1001                 | ne knowledge t  | hat willful false staten                      |                                 |                         |
| Full name of sole a   | or first inven                                     | tor (given name, family nar  |                   | Jane LU                   |   | Date  |                                 |                         |
| Residence :<br>Post Office Addres   | ss:  |  |                   |                           |   | Citizenship:                                  |                                 |                         |
| Full name of secon<br>Second Inventor's<br>Residence: ✓<br>Post Office Addres | signature 🔽  | tor (given name, family nar<br>0's AU W U  |                   | Paul WU                   |   | Date (O)                                      | 19 100<br>SA                    |                         |
|   | S  | aratoga, CA  | 950               | 70                        | <del></del>   |   |                                 |                         |
| full name of third Third Inventor's signer Residence: Tost Office Addres      | gnature  | r (given name, family name   | ):<br>            | Ray CHE                   | N<br>   | Date  | <del></del>                     |                         |
| ull name of fourth<br>ourth Inventor's s<br>esidence :                        | ignature   | or (given name, family nam   | e):               | Scott CH                  |   | Date  |                                 |                         |
| ost Office Address  |  |  |                   |                           |   | Citizenship:                                  |                                 | _                       |
| Additional  | inventors are                                      | being named on separately  | numb              | ered sheet                | s attached here   | eto.  |                                 |                         |

| Full name of fifth joint inventor (given name, family name): |            |                      |
|--|------------|----------------------|
| Fifth Inventor's signature                                   | Jeff CHANG | Date<br>Citizenship: |
|  |            |                      |

.

### DI ARATION FOR PATENT APPLICATION

| As a below named inventor, I hereby declare that:   |   |  |                                       |   |  | Attorney Docket No                           | 02                   | 946-Z               |
|---|---|--|---------------------------------------|---|--|--|----------------------|---------------------|
| My residence, post office   | address and citizenshi  | p are as stated i  | elow nex                              | to my n   | ame.   |  |                      |                     |
| I believe I am the origin<br>names are listed below)<br><u>CORE SUBSTRATE P</u><br>AND METHOD   | of the subject matter wi<br>RINTED BOARD ENA  | hich is claimed :<br>ABLING THER   | and for w                             | hich a pa<br>ENHANG   | tent is sought of                                      | on the invention enti<br>RID ARRAY (BGA)     | tled N               | METAL               |
| was file Applica  | d on <u>April 6, 2000</u> a   | s United States<br>and was amend   | Applicati                             |   |  | 3_ or PCT Interna<br>applicable).            | tional               |                     |
| I hereby state that I have<br>by any amendment refer<br>I acknowledge the duty to<br>\$1.56.  | red to above.<br>o disclose information w   | vhich is material  | to paten                              | ability as  | defined in Titl  | e 37, Code of Federa                         | al Regui             | lations,            |
| I hereby claim foreign pr<br>certificate listed below a<br>before that of the applica<br>Prior Foreign Applicatio   | nd have also identified t<br>ation on which priority i  | oelow any foreig   | ates Code<br>n applica                | , §119 of<br>ion for p  | any foreign app<br>atent or invent                     | or's certificate havin                       | g a filii            | ng date             |
| (Number) (Countr  |   | (Day/Month/Y   | oon Filed)                            |   |  |  | riority C<br>I Yes I |                     |
| (Country  | y)  | (Day/Month/ 1  | ear riieu)                            |   |  | 8  | Yes [                | □ No                |
| (Number) (Countr  | y)  | (Day/Month/Y   | ear Filed)                            |   |  | _  |                      |                     |
| hereby claim the beneficubject matter of each of by the first paragraph of patentability as defined in application and the nation 60/128,948  (Application Number)      | the claims of this applie<br>f Title 35, United States<br>n Title 37, Code of Fed   | cation is not disc<br>s Code, §112, I<br>leral Regulation:<br>al filing date of                | closed in (<br>acknowle<br>s, §1.56 w | he prior<br>dge the c<br>hich beca<br>cation.<br><u>Pendi</u> | United States a<br>luty to disclose<br>ame available b | pplication in the ma<br>information which    | nner pr<br>is mate   | rovided<br>erial to |
|   | - (Fining Date)   | ···-   |                                       |   |  |  |                      |                     |
| (Application Number)  | (Filing Date)   |  |                                       | (Status   | - patented, pend                                       | ling, abandoned)                             |                      |                     |
| I hereby appoint the follo<br>connected therewith: Jin<br>Address all corresponder<br>I hereby declare that all sere believed to be true; a<br>nade are punishable by f | n Zegeer (Registration Notes to: Law Offices of , 801 North Pitt : Alexandria, VA tatements made herein on further that these sta | lo. 18,957), Tele<br>Jim Zegeer<br>Street, #108<br>22314<br>of my own knowl<br>atements were m | phone: 70<br>edgeare t<br>iade with   | 3-684-833<br>rue and t  | 13.<br>hat all statemer<br>ledge that willf            | its made on informa<br>ul false statements a | tion and             | d belief<br>like so |
| alse statements may jeop  | • ′   |  |                                       |   |  | States Code and the                          | at sucn              | willtui             |
| Full name of sole or first nventor's signature  |   | •  | Jane Ll                               | J   | D  | ate  |                      |                     |
| Residence :   |   |  |                                       |   |  | ship:  |                      |                     |
| · ·   |   |  |                                       |   |  |  |                      |                     |
| Full name of second join<br>Second Inventor's signate<br>Residence :<br>Post Office Address:  |   | •  | Paul W                                | U   |  | Dateship:                                    | <del></del>          |                     |
| ost Office Address.   |   |  |                                       |   |  |  |                      |                     |
| Full name of third joint is third Inventor's signatur Residence:  | nventor (given name, fa<br>e Non Che<br>2015 Mento D<br>Fremont   | mily name):  77.70  A 94.1-39  | Ray CH                                | en<br>A   | D<br>Citizen   | ate 1%                                       | <u>, 23</u>          |                     |
| Full name of fourth joint<br>Fourth Inventor's signatu<br>Residence :   |   | <del></del>  | Scott C                               | HEN   |  | Dateship:                                    |                      |                     |
| ost Office Address:   |   |  |                                       |   |  | •  | _                    |                     |

| Full name of fifth joint<br>Fifth Inventor's signature | inventor (given name, family name): re | Jeff CHANG | Date         |     |  |
|--|--|------------|--------------|-----|--|
| Residence : Post Office Address:                       |  |            | Citizenship: | · , |  |
| 1 001 0111011011001                                    |  |            |              |     |  |
|  |  |            |              |     |  |
|  |  |            |              |     |  |
|  |  |            |              |     |  |

.

.

e.

Jun 24 03 01:30p

703-549-8411

TO:408 868 9088

P.002/003

DECLARATION AND POWER OF ATTORNEY FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)

- Declaration Submitted with Initial Filing. a
- Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16(e)) required).

Attorney Docket Number: 2946-Z

First Named Inventor: Jane Lu

COMPLETE IF KNOWN

Application Number: 09/544,263 Filing Date:

April 6, 2000

Group Art Unit: Examiner Name:

As a below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled METHOD OF MAKING METAL CORE SUBSTRATE PRINTED CIRCUIT WIRING BOARD ENABLING THERMALLY ENHANCED BALL GRID ARRAY (BGA) PACKAGES , the specification of which is attached hereto unless the following box is checked:

was filed on April 6, 2000 as United States Application Serial No. 19/544,263 or PCT International 8 Application No. \_\_\_\_\_\_ and was amended on \_\_\_\_\_ \_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended hy any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuationin-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

Foreign Application(s) und/or Claim of Foreign Priority

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or any PCI international application having a filing date before that of the application on which priority is claimed.

| Country | Application Number | Date Filed<br>(MM/DD/YYYY) | Priority Claimed Under 35 U.S.C. § |
|---------|--------------------|----------------------------|------------------------------------|
|         |                    |                            | □ Yes □ No                         |
|         |                    |                            |                                    |

Provisional Application

I hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below:

| Application Serial Number | Filing Date    |  |  |
|---------------------------|----------------|--|--|
| 60/128,948                | April 13, 1999 |  |  |
|                           |                |  |  |

U.S. Priority Claim

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided try the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, \$1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

| Application Serial Number | Filing Date | Status - Patented/Pending/Abandoned |
|---------------------------|-------------|-------------------------------------|
|                           |             |                                     |
|                           |             |                                     |

JUN-24-2003 10:18 FROM:JIM ZEGEER ·

. 703-549-8411

TO:408 868 9088

P.003/003

POWER OF ATTORNEY

I hereby appoint the following attorney to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: Jim Zegeer (Registration No. 18,957), Telephone: 703-684-8333, Fax: 703-549-8411.

Address all correspondence to:

Law Offices of Jim Zegeer 801 North Pitt Street, #108 Alexandria, VA 22314

| 2003   |
|--------|
|        |
|        |
|        |
| 4/2003 |
|        |
|        |
|        |
|        |
|        |
|        |
|        |